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# SPREADWINGS

*Spreading The Joy Of Odonutting*

NEWSLETTER OF SOCIETY FOR ODONATE STUDIES



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# SPREADWINGS

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## *Phylloneura rupestris*

Chandran, Chandran & Jose, 2024

Cliffside Bambootail

പാറമുത്തൻ മുളവാലൻ

നൂറ് വർഷത്തോളം നമ്മൾ കരുതി പോന്നത് 'ഫൈലോനൂറ' എന്ന ജനുസ്സിൽ ഒരൊറ്റ തുമ്പി വർഗമേ ഉള്ളൂ എന്നായിരുന്നു. എന്നാലിപ്പോൾ പശ്ചിമഘട്ടത്തിന്റെ വാലറ്റത്ത് തലയുയർത്തിനിൽക്കുന്ന പൊന്മുടിയിൽ നിന്നും ഇതേ ജനുസ്സിലെ പാറമുത്തൻ മുളവാലൻ എന്ന പുതിയൊരിനം തുമ്പിയെ കണ്ടെത്തിയിരിക്കുന്നു. ഉദരത്തിൽ ഗോപികുറി പോലുള്ള നീല വരയുള്ളതിനാൽ ഇതിനെ വളരെ എളുപ്പം തിരിച്ചറിയാം. മഴക്കാലത്ത് കാട്ടിൽ പാറകൾക്ക് മുകളിലൂടെ ഒഴുകുന്ന ചെറു അരുവികളിലാണിവ പ്രജനനം നടത്തുന്നത്.



Cover Photo : Reji Chandran

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Do you have a special experience related to odonata that you want to share?

Or a photograph?

Or may be a painting?

Or a popular science article?

Or even a research article.

We accept anything and everything related to Odonata.

Mail your entries to

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## EDITORIAL

*Midstream  
clinging to the boulder—  
the dragonfly.*

Kobayashi Issa, the Japanese Haiku poet, gives the frozen yet moving image of a dragonfly. I am reminded of the lives lost at the Wayanad disaster. How many humans, how many other animals! SOS and Spreadwings team offer our deepest condolences to the bereaved.

This issue of Spreadwings open with a bang. We get a peek into the adventurous and exciting life of Surya Ramachandran. Like a dragonfly, Surya flies across the country, zooming down on the most pristine landscapes. He is delirious about dragonflies but the truth is he is madly in love with nature in toto. But the love is tempered with scientific understanding. In 'An Amateur's pursuit of Dramselflies', Surya shares the pleasures of being a naturalist; he is an object of envy and of inspiration at the same time.

. Dr Alex P Zacheria, Assistant Professor at Mar Thoma College, Thiruvalla highlights the role of odonates as an ecological indicator of waterbodies. He emphasizes the need for conservation of aquatic habitats.

Sometimes one cannot but feel regret at growing old. Samartha SG, a IXth standard student from Mysore has compiled a fantastic checklist of 75 species of odonates from Mysore district. How wonderful, how enviable, how fortunate is Samartha! For old-timers like me, children like Samartha is a rekindling of hope for the world.

Ahmed Saeed's note reflects the excitement of discovery of the world of dragonflies. His world expands from the rural Malappuram district in Kerala to the arid land of Rajasthan where one would not expect many odonates. But with a growing list of odonate species, Ahmed's studies in Rajasthan is bound to bear much longer list, if not fruits.

Cicy Ann Theophin, one of the senior and experienced members of SOS takes a humorous dig at humans, from the perspective of a dragonfly. If only dragonflies could speak!

SOS seems to be bringing out one species per month or quarter at least, these days! In Ode News, Vivek Chandran describes the discovery of - not one, but two species! Such discoveries of new species point out two things; one, that there would be yet many more unknown species to be discovered and two, that conservation of natural habitats has become ever more urgent, in the wake of Climate Change and the frequent natural disasters. While the Wayanad tragedy is rightly focussed on human life, who knows or cares about the other forms of life that may have disappeared forever?



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# AN AMATEUR'S PURSUIT OF DRAMSELFLIES!!!

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## A SNAPSHOT

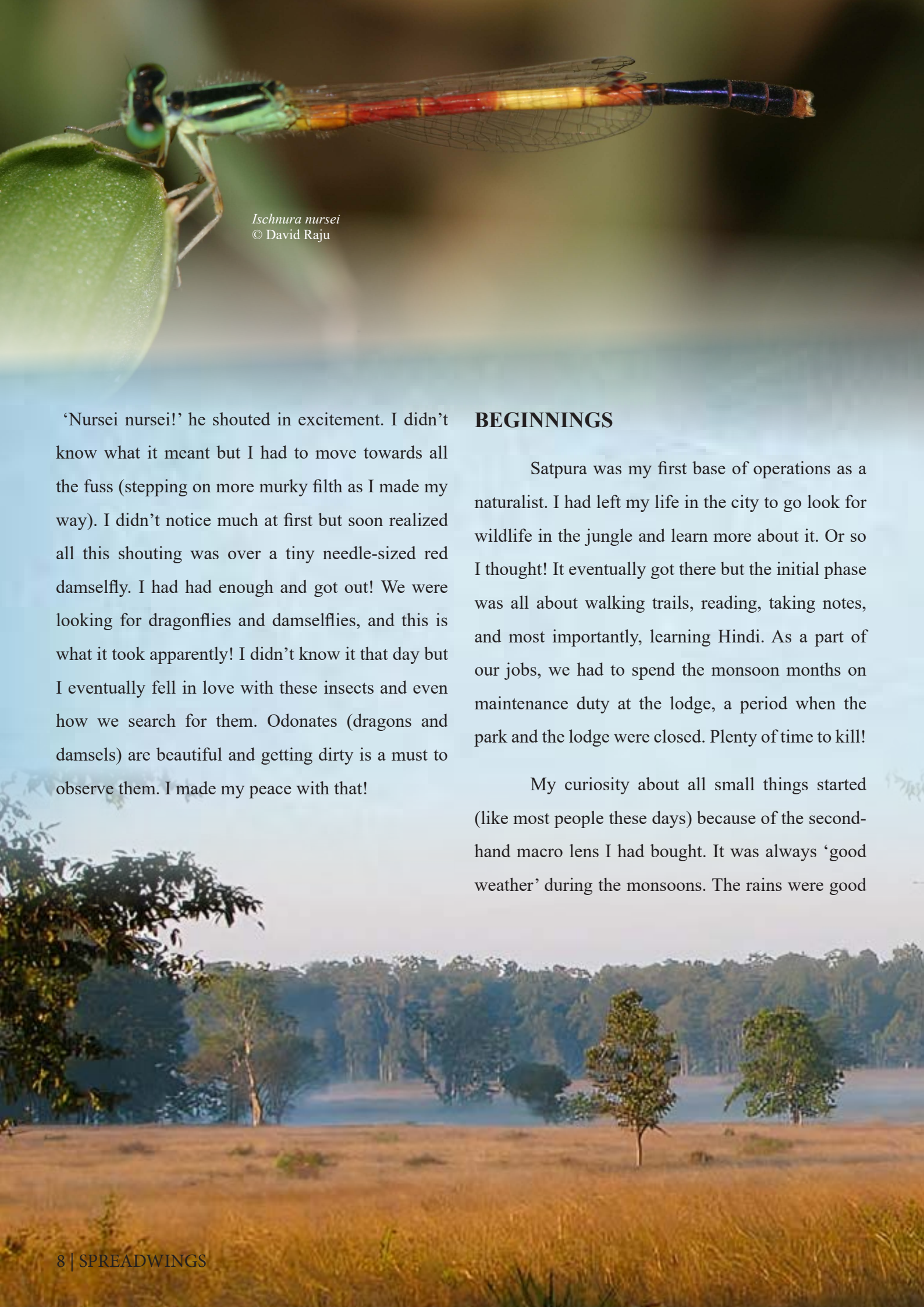
**W**e were waist-deep in a bog. Our feet sank through rotting vegetation, wet mud, and things we didn't want to know more about. Monsoon clouds started to build up over our heads threatening another bout of rain... it could've been a relief from the heat and humidity. The frogs around us called out in excitement. Sounds like the middle of a great adventure, right? Trust me! It wasn't half as interesting as it sounds.

This is not one of those stories that unfold in the heart of a pristine rainforest. We were exploring

a big ditch by the side of a small village road with bikes speeding up and down, slowing down only to stare at us in utter confusion. The monsoon rains had filled the otherwise parched ditches with water, vegetation, and reeds. Buffalos cooled off on the other side of the bog. It was my first few weeks in the wilderness, straight out of the big city. The person who was supposed to be teach me the dos and don'ts of the wild had just asked me to remove my slippers and jump in the bog. It was none other than my then tormentor and now dear friend, David Raju.







*Ischnura nursei*  
© David Raju

‘Nursei nursei!’ he shouted in excitement. I didn’t know what it meant but I had to move towards all the fuss (stepping on more murky filth as I made my way). I didn’t notice much at first but soon realized all this shouting was over a tiny needle-sized red damselfly. I had had enough and got out! We were looking for dragonflies and damselflies, and this is what it took apparently! I didn’t know it that day but I eventually fell in love with these insects and even how we search for them. Odonates (dragons and damsels) are beautiful and getting dirty is a must to observe them. I made my peace with that!

## BEGINNINGS

Satpura was my first base of operations as a naturalist. I had left my life in the city to go look for wildlife in the jungle and learn more about it. Or so I thought! It eventually got there but the initial phase was all about walking trails, reading, taking notes, and most importantly, learning Hindi. As a part of our jobs, we had to spend the monsoon months on maintenance duty at the lodge, a period when the park and the lodge were closed. Plenty of time to kill!

My curiosity about all small things started (like most people these days) because of the second-hand macro lens I had bought. It was always ‘good weather’ during the monsoons. The rains were good





for snakes and frogs, and the sun for butterflies, dragonflies, and flowers. And the nights for a whole new array of creatures.

With odonates, I was hooked by books by Dr. Subramanian K.A., Dr. Manoj Nair and the book on Kerala dragonflies' by C.G. Kiran and David. Apart from this, there were always those I got to see in the field with David and others. Soon I had a small collection of images of my own, of species I could identify positively. Being able to name a creature accurately is always the first connection you make with it. And it is surely a great feeling when that happens. Swarms of *Pantala* awaiting the winds to start their journey over oceans, hundreds of green marsh hawks predating on anything they can find

including other dragonflies, rock gliders, picture wings, pixie dartlets, marsh darts, saffron-faced blue darts, clubtails, and hooktails were all seen regularly between the woodland and swamps within camp. It was an incredible world of aerial dragons that I could slowly piece together. We even managed to find a perched *Macromia flavicinta* on one of our walks, a big highlight even today, more than a decade later.

## CENTRAL INDIAN ODONATES

Central India is not really known much for its great species diversity; rather it's the home of jungle safaris and grand wildlife viewing. But during my seven years there we found a whole lot of interesting creatures just a stone's throw away from the safari track, just waiting to be noticed.





One thing was clear, Central India, apart from showing signs of being a generalist dryland/ woodland habitat, was heavily influenced in parts by elements from the Western Ghats and also species known from the Northeast of the country. This theory is popularly known as the Satpura hypothesis and it showed itself among many interesting creatures and definitely in odonates too. Places like Panchmarhi, Kanha, Amarkantak and Bastar are great examples of the influences of landscapes outside of what we know as Central India. I still remember an incident with David where a popular waterhole hotspot for tigers on the safari tracks in Kanha, was also the best location for giant forest skimmers – a perfect anecdote for odonate exploration in Central India.

For example, in Panchmarhi and in Kanha too, we found black Bambootails, Blue Hawklets, Stream Rubies, Forest Skimmers, *Zygonyx*, *Caconeura*, Coorg Spreadwings, *Neurobasis*, Lesser Bluewings, Forest Glories and Violet-Striped Blue Darts, all species known better from the Western Ghats. Along with these were river heliodors (*L. lineata*), Giant Forest Skimmers, Black Torrent Gliders, interesting spreadwing species, and also a colour morph of Orange-Tailed Marsh Darts seen in the Northeast of the country. It was like putting together a puzzle. A few other odonate enthusiasts photographed and



recorded rarer species that were new records like *Cyclogomphus heterostylus*. From Odisha came records of *Megalogomphus*, pied reedtails, and other interesting dragons and damsels. There are one or two yet-to-be-identified species in our list. We also recorded species that showed influences of western and northern India, especially at Bharatpur (a fantastic destination for odonate viewing during the monsoons) and from around Nagpur and the drier reaches of Chandrapur.



## THE FIRST BOOK

With this bank of data collected over 10 years, David suggested we put together a book on Central Indian wildlife and odonates would be a key part of it. There were still gaps in our checklist and more exploration was needed, but a book covering odonates of Central India along with other fauna could inspire others, many others, to get hooked by the hooktails.

It was David, of course, who steered the odonate section of the book and I managed to learn a whole lot more while writing the book than when I was ‘dragonflying.’ Looking through various images, flipping through volumes by Fraser and chatting with other odonate experts, it was an enlightening experience. Before we knew it, the book was out and suddenly, I was considered as someone who knew odonates. It was too much pressure and I had to figure it all out! No more coat-tailing David.

### VISITS TO WESTERN GHATS, BUXA, NAMDAPHA, SINGALILA, KASHMIR AND HOME

In the years that followed, I visited many areas, some focused on general wildlife and some focused on odonates (and other insects). Thattekkad in Kerala provided many interesting firsts for me like

*Myristica Sapphire* and *Onychargia atrocyana*. There were giant spreadwings *Megalestes* sp. that we came across in the open glades of Dachigam in Kashmir. The gorgeous *Aristocypha* sp. from Buxa was the highlight of the trip. A brightly patterned Gomphid seen while on a ten-day hike in Namdapha remains to be identified beyond genus level (can’t remember the genus either now).



Dragonfly habitat - Bhutan

The most important highlight was visiting what most of the ‘Odonaters’ consider the Dragonfly Mecca. It was Tonglu Lake, situated at 3500 m asl on the Singalila Ridge in the Eastern Himalayas. I didn’t see much here but this was the last known location of the country’s only Schedule 1 odonate, the Anisozygopteran *Epiophlebia laidlawi*. A unique species, summed up as a dragonfly with damselfly wings. Known only from this part of India and



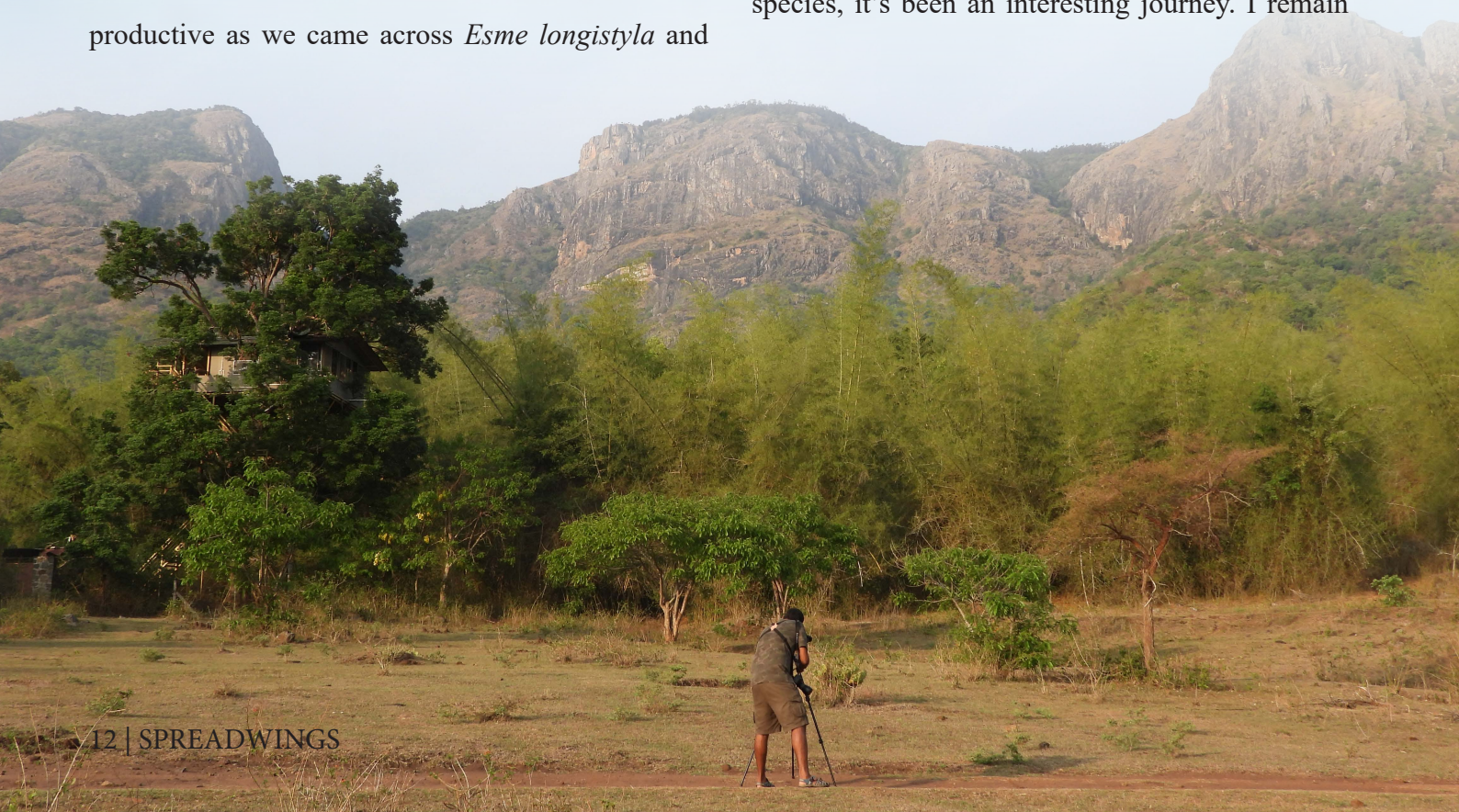
Nepal, its larva was last seen in this lake. There are stories and research that show that these larvae can remain immobile for many years (sometimes in frozen conditions) before emerging as an adult when the conditions are just right.

After all this travel came the disaster of Covid and our long haul at our home in Mudumalai, among the Nilgiris. The first time we were going to be in one place for many many months. What initially seemed like a curse quickly turned around when an ornate flying snake and an *Indolestes pulcherrimus* were seen around our home on the same day. It was home but with all the constant travel we hadn't explored the landscape for odonates yet. That started a series of walks exploring rivers, streams and temporary rainwater marshes. Kodagu clubtail, *Microgomphus sp.* and a few Lestes species were seen in the initial weeks. When the Covid restrictions were relaxed, we explored the greater Nilgiri landscape around Gudalur, Coonoor, Nadugani and Sholur. We saw a lot of the usual suspects including many *Sympetrum sp.* in the higher grasslands. Some streams were very productive as we came across *Esme longistyla* and

*Caconeura gomphoides*, both rare high-altitude endemics of the Western Ghats. Excited by our recent sightings, we decided to go one step further. Fraser had described many species from southern Coorg and the Nilgiris in his extensive volumes and we went in search in those areas too. Like most of the Nilgiris, a lot of habitats in these localities were also lost or destroyed. Streams covered with trash, Sholas converted into tea estates or entire towns where once rare dragonflies roamed around. Despite the misses, it was an interesting journey surely...looking for lost species from the fine script in old British texts. Some of the interesting sightings were a *Cholorogomphus sp.* flying high above a hill slope and a *Hemicordula sp.* patrolling its territory at 2000 metres asl.

## THE JOURNEY AHEAD

We have a lot more to explore and understand both around home in the Nilgiris and the greater landscape of India. From feeling miserable for wading through a marsh to seeking out lost species, it's been an interesting journey. I remain





an amateur enthusiast and I'm happy to continue as one in the years to come and leave the serious science to the experts. Wading the marshes, staring across streams and finding the dragons and photographing them is good enough for me. And that is all most of us need to do to contribute to data and science, and most importantly, enjoy the world of 'Dramselflies.' We culminated our journey of more than ten years when we published the South India Guide Book and its subsequent second version. It was an exciting learning on the odonates of Peninsular India. It was also a great opportunity to know how much more needs to be done to fill the gaps in the science of Odonatology. There is a lot of excitement in this field in the months and years to come, a lot to find, a lot of new species, lost species and the usual suspects to watch and cherish. It's a journey that never truly ends...the pursuit of Dramselflies.

## About the Author

Surya Ramachandran is academically an engineer from Chennai. After his college days, he decided to head into the wilds of Central India as a naturalist, spending time in Satpura, Kanha and Panna and in due course authoring the Photographic Guide to Central Indian Wildlife with his friend and colleague David Raju. The last eight years of his life have been spent in the mountains of the trans-Himalaya of India exploring possibilities to work with the community in setting up snow leopard and brown bear tracking operations. His core interests lie in understanding microhabitats and stories of ecological relationships of the places he visits. He is widely travelled in the subcontinent, with the personal focus areas being the cold deserts of Ladakh, the deserts of Western India and the Western Ghats. Along with David Raju, he has also released the comprehensive Photographic field guide - Wildlife of South India in 2020 and a subsequent second edition of the same in 2024. Surya is fundamentally a wildlife guide. He currently leads specialist wildlife expeditions to the various corners of our subcontinent and beyond.



*Caconeura gomphoides*  
© Surya Ramachandran



*Calicnemia* sp.  
© Surya Ramachandran



*Lestes patricia*  
© Surya Ramachandran

# Unveiling the Ecological Importance of Odonates: Guardians of Aquatic Ecosystems

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Within the intricate web of ecosystems, Odonates emerge as silent stewards, embodying the essence of ecological equilibrium and resilience. These fascinating creatures, commonly known as dragonflies and damselflies, grace the skies and aquatic realms with their graceful flight and vibrant colors. However, beyond their aesthetic charm lies a profound contribution to the essential services that sustain the health of our planet. Odonates belong to the Order Odonata, encompassing two distinct suborders:

Anisoptera (dragonflies) and Zygoptera (damselflies). With over 6,000 species worldwide, they inhabit a diverse array of freshwater ecosystems, from pristine streams to urban ponds. Their life cycle, characterized by an aquatic nymphal stage and a terrestrial adult stage, intimately connects them with both aquatic and terrestrial environments.

Among their critical ecological roles is their function as bioindicators of aquatic ecosystem health. Odonate nymphs exhibit high sensitivity to water quality and are frequently employed as indicators



of pollution levels and habitat degradation. Their presence or absence can signal alterations in water chemistry, nutrient levels and overall ecosystem integrity. Through monitoring odonate populations, scientists and conservationists gain invaluable insights into the well-being of aquatic ecosystems, enabling targeted conservation efforts.

Odonates are voracious predators, feeding on various small insects, including mosquitoes and their larvae. Dragonflies, in particular, with their exceptional aerial agility and predatory prowess, rank among the most effective natural predators of mosquitoes. Their role in natural pest control reduces our reliance on chemical insecticides, thereby promoting sustainable and environmentally friendly pest control measures.

Conservation action should focus on restoring and preserving suitable habitats, implementing stricter regulations governing water usage and contamination, raising public awareness about the value of Odonates and encouraging responsible development practices that minimize impacts on wetlands and other vulnerable ecosystems. By fostering collaborations between government agencies, nonprofit organizations, academic institutions, and private enterprises, we can pool

resources and expertise to develop comprehensive strategies aimed at conserving odonates and enhancing the resilience of the ecosystems they inhabit. Ultimately, investing in the protection of odonates means investing in the future of our planet – one marked by healthy, functional ecosystems capable of sustaining generations to come.

### **About the Author**

Alex Zecharia is an assistant professor at Department of Zoology, Mar Thoma College, Tiruvalla.





# A preliminary checklist of the Odonates of Mysuru District, Karnataka

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**M**ysuru or Mysore is a southern district of Karnataka, located at 12.3 latitude and 76.6 longitude. The area is rich in biodiversity. Mysore city and outskirts are also home to diverse flora and fauna. In early 2011, a non-government group named 'MYSORE NATURE' started studying and documenting the wildlife of Mysore, Mandya, and Chamarajanagara districts (excluding the reserve forest areas) under the guidelines of Shri K B Sadananda. Now the efforts are being continued under the leadership of Shri. Shivapraksh Adavanne.

Mysore Nature's intention was to document all forms of life found in Mysore. During the initial days, the activities of Mysore Nature were limited to the study of birds, butterflies and plants. Later, we began documenting odonates, amphibians, and spiders. It is worth mentioning the efforts of Shri. Karthikeyan S, a member of Mysore Amateur Naturalists in documenting the Odonata diversity of Mysore City as well as Melkote in Mandya District.

Mysore has a good network of aquatic habitats. There are several tributaries of Kaveri river (7 in total)





flowing through the area with Lakshmanathirtha and Kabini being the major tributaries. There are several lakes such as Kukkarahalli, Karanji and Lingambudhi. Apart from these, there are nearly 1757 ponds, 22 small dams and 7 reservoirs spread across the district.

During the nature walks in the city outskirts organized by Mysore Nature, the odonates were observed and photographed. Identification was done with the help of various field guides and in

consultation with various experts. Secondary data from online repositories like iNaturalist were also used to compile this checklist.

A total of 75 species of Odonata belonging to 9 families and 48 genera were documented from Mysore District. Of the 75 species, 26 species belong to the Suborder Zygoptera and 49 species belong to the Suborder Anisoptera. Notable species include *Disparoneura quadrimaculata*, *Burmagomphus pyramidalis* and *Cyclogomphus heterostylus*.

**Table 1.** Checklist of odonates of Mysore

Scientific Name		Common Name
<b>Order: Odonata Fabricius, 1793</b>		
<b>Suborder: Zygoptera Selys, 1854</b>		
<b>Family: Lestidae Calvert, 1907</b>		
1	<i>Lestes elatus</i> (Hagen in Selys, 1862)	Asian /Emerald Spreadwing
2	<i>Lestes praemorsus</i> , (Hagen in Selys, 1862)	Sapphire-eyed Spreadwing
<b>Family: Calopterygidae Selys, 1850</b>		
3	<i>Neurobasis chinensis</i> (Linnaeus, 1758)	Stream Glory
4	<i>Vestalis apicalis</i> (Selys, 1873)	Black-tipped Forest Glory
5	<i>Vestalis gracilis</i> (Rambur, 1842)	Clear-winged Forest Glory
<b>Family: Chlorocyphidae Cowley, 1937</b>		
6	<i>Libellago indica</i> (Fraser, 1928)	River Heliodor
7	<i>Heliocypha bisignata</i> (Selys 1853)	Stream Ruby
<b>Family: Platycnemididae Yakobson &amp; Bainchi, 1905</b>		
8	<i>Copera marginipes</i> (Rambur, 1842)	Yellow Bush Dart
9	<i>Disparoneura quadrimaculata</i> (Rambur, 1842)	Black-winged Bambootail



*Disparoneura quadrimaculata*  
കരിഞ്ചിറകൻ മുളവാലൻ  
© Vivek Chandran

10	<i>Elattoneura nigerrima</i> (Laidlaw, 1917)	
11	<i>Onychargia atrocyana</i> (Selys, 1865)	Black Marsh Dart
12	<i>Prodasineura verticalis</i> (Selys, 1860)	Black Bambootail
<b>Family: Coenagrionidae Kirby, 1890</b>		
13	<i>Aciagrion occidentale</i> (Laidlaw, 1919)	Green-striped Slender Dartlet
14	<i>Agriocnemis pieris</i> (Laidlaw, 1919)	White Dartlet
15	<i>Agriocnemis pygmaea</i> (Rambur, 1842)	Pygmy Dartlet
16	<i>Amphiallagma parvum</i> , (Selys, 1877)	Azure Dartlet
17	<i>Ceriagrion coromandelianum</i> (Fabricius, 1798)	Coromandel Marsh Dart
18	<i>Ceriagrion rubiae</i> Laidlaw, 1916	Orange Marsh Dart
19	<i>Ischnura rubilio</i> (Selys, 1876)	Western Golden Dartlet
20	<i>Ischnura senegalensis</i> (Rambur, 1842)	Senegal Golden Dartlet
21	<i>Paracercion melanotum</i> (Selys, 1876)	Eastern Lilly-Squatter
22	<i>Pseudagrion australasiae</i> Selys, 1876	Look-Alike Sprite
23	<i>Pseudagrion decorum</i> (Rambur, 1842)	Three-lined Dart
24	<i>Pseudagrion malabaricum</i> Fraser, 1924	Malabar Sprite
25	<i>Pseudagrion microcephalum</i> (Rambur, 1842)	Blue Grass Dartlet
26	<i>Pseudagrion rubriceps</i> Selys, 1876	Saffron-faced Blue Dart
<b>Suborder: Anisoptera Selys, 1854</b>		
<b>Family: Aeshnidae Leach, 1815</b>		
27	<i>Anaciaeschna jaspidea</i> (Burmeister, 1839)	Rusty Darner
28	<i>Anax ephippiger</i> (Burmeister, 1839)	Vagrant Emperor
29	<i>Anax guttatus</i> (Burmeister, 1839)	Blue-tailed Green Darner
30	<i>Anax immaculifrons</i> Rambur, 1842	Blue Darner
31	<i>Anax indicus</i> Lieftinck, 1942	Lesser Green Emperor
32	<i>Gynacantha dravida</i> Lieftinck, 1960	Brown Darner
33	<i>Gynacantha millardi</i> Fraser, 1920	Parakeet Darner
<b>Family: Gomphidae Rambur, 1842</b>		
34	<i>Burmagomphus pyramidalis</i> Laidlaw, 1922	Sinuate Clubtail
35	<i>Cyclogomphus heterostylus</i> Selys, 1854	Paddled clubtail
36	<i>Ictinogomphus rapax</i> (Rambur, 1842)	Indian Common Clubtail
37	<i>Macrogomphus annulatus</i> (Selys, 1854)	Deccan Bowtail
38	<i>Paragomphus lineatus</i> Selys, 1850	Common / Lined Hooktail

**Family: Macromiidae Needham, 1903**

39	<i>Epophthalmia vittata</i> Burmeister, 1839	Common Torrent Hawk
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**Family: Libellulidae Leach, 1815**

40	<i>Acisoma panorpoides</i> Rambur, 1842	Trumpet-Tail
41	<i>Brachydiplax sobrina</i> (Rambur, 1842)	Little Blue Marsh Hawk
42	<i>Brachythemis contaminata</i> (Fabricius, 1793)	Ditch Jewel
43	<i>Bradinopyga geminata</i> (Rambur, 1842)	Granite Ghost
44	<i>Crocothemis servilia</i> (Drury, 1770)	Ruddy Marsh Skimmer
45	<i>Diplacodes lefebvrei</i> (Rambur, 1842)	Black Ground Skimmer
46	<i>Diplacodes nebulosa</i> (Fabricius, 1793)	Black-tipped Ground Skimmer
47	<i>Diplacodes trivialis</i> (Rambur, 1842)	Blue Ground Skimmer
48	<i>Hydrobasileus croceus</i> (Brauer, 1867)	Amber-winged Glider
49	<i>Indothemis carnatica</i> (Fabricius, 1798)	Black Tipped Demon
50	<i>Lathrecista asiatica</i> (Fabricius, 1798)	Asiatic Bloodtail
51	<i>Neurothemis fulvia</i> (Drury, 1773)	Fulvous Forest Skimmer
52	<i>Neurothemis tullia</i> (Drury, 1773)	Pied Paddy Skimmer
53	<i>Onychothemis testacea</i> (Laidlaw, 1902)	Stellate River Hawk
54	<i>Orthetrum chrysis</i> (Selys, 1891)	Brown-backed Marsh Hawk
55	<i>Orthetrum glaucum</i> Brauer, 1865	Blue Marsh Hawk
56	<i>Orthetrum luzonicum</i> (Brauer, 1868)	Tri-coloured Marsh Hawk
57	<i>Orthetrum pruinosum</i> (Rambur, 1842)	Crimson-tailed Marsh Hawk
58	<i>Orthetrum sabina</i> (Drury, 1770)	Green Marsh Hawk
59	<i>Orthetrum taeniolatum</i> (Schneider, 1845)	Taeniolate Marsh Hawk
60	<i>Pantala flavescens</i> (Fabricius, 1798)	Wandering Glider
61	<i>Potamarcha congener</i> (Rambur, 1842)	Yellow-tailed Ashy Skimmer
62	<i>Rhodothemis rufa</i> (Rambur, 1842)	Rufous Marsh Glider
63	<i>Rhyothemis triangularis</i> (Kirby, 1889)	Lesser Blue-wing



*Diplacodes nebulosa*  
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64	<i>Rhyothemis variegata</i> (Linnaeus, 1763)	Common Picturewing
65	<i>Sympetrum fonscolombii</i> (Selys, 1840)	Red-veined Darter
66	<i>Tetrathemis platyptera</i> Selys, 1878	Pygmy Skimmer
67	<i>Tholymis tillarga</i> (Fabricius, 1798)	Coral-Tailed Cloudwing
68	<i>Tramea basilaris</i> (Palisot de Beauvois, 1805)	Red Marsh Trotter
69	<i>Tramea limbata</i> (Desjardins, 1832)	Black Marsh Trotter
70	<i>Trithemis aurora</i> (Burmeister, 1839)	Crimson Marsh Glider
71	<i>Trithemis festiva</i> (Rambur, 1842)	Black Stream Glider
72	<i>Trithemis kirbyi</i> Selys, 1891	Scarlet Rock Glider
73	<i>Trithemis pallidinervis</i> Kirby, 1889	Long-legged Marsh Glider
74	<i>Urothemis signata</i> Rambur, 1842	Greater Crimson Glider
75	<i>Zygomma petiolatum</i> Rambur, 1842	Brown Dusk Hawk

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Samartha SG is a 9th standard student from Mysore, Karnataka. Samartha is very passionate about nature and is actively involved in documentation of biodiversity in and around his school, Arivu Vidya Samsthe, Mysore.

*Tetrathemis platyptera*  
കുളുന്തുമ്പി  
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# എന്റെ തുമ്പിക്കുട്ടന്മാരും ഞാനും

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മറ്റു പലരേയും പോലെത്തന്നെ ലോക്ക്ഡൗൺ സമയത്താണ് ഞാനും പ്രകൃതി നിരീക്ഷണത്തിലേക്ക് ഇറങ്ങുന്നത്. തുടങ്ങിയത് പക്ഷി നിരീക്ഷണത്തിലാണെങ്കിലും ഏറെ കൗതുകപ്പെടുത്തിയതും ഇഷ്ടം തോന്നിയതും തുമ്പികളോടായിരുന്നു. ക്യാമറ ഇല്ലാതിരുന്ന തുടക്കകാലത്ത് ഓരോന്നിനേയും കൗതുകത്തോടെ നോക്കിക്കാണുമ്പോൾ ഏറ്റവും അടുത്ത് നിന്ന് നിരീക്ഷിക്കാൻ എളുപ്പം തുമ്പികളെയാണ് എന്നത് തന്നെയാണ് തുമ്പിയിൽ തുടക്കം മുതൽ ഇഷ്ടം കൂടാൻ കാരണമായി തോന്നുന്നത്. ഫോണുമായി വളരെ പതിയെ പതിയെ, കമ്പിലോ മറ്റോ ഇരിക്കുന്ന തുമ്പിയുടെ അടുത്തേക്ക് എത്തുമ്പോൾ,

ഒരു പോയന്റിൽ തുമ്പി ഒന്ന് പൊന്തിപറക്കും; എന്നാൽ പെട്ടെന്ന് തന്നെ തിരിച്ച് അതേ കമ്പിലെ അതേ സ്ഥാനത്ത് വന്നിരിക്കുമ്പോൾ കിട്ടുന്ന ഒരു സന്തോഷം ഉണ്ടല്ലോ, ന്റെ സാരം..... ആ ഒരു ബന്ധം സ്ഥാപിച്ചാൽ പിന്നെ എനിക്ക് തോന്നും ഞങ്ങൾ നല്ല ഫ്രണ്ട്സ് ആയി. പിന്നെ ഇങ്ങനെ അങ്ങോട്ടുമിങ്ങോട്ടുമൊക്കെ തിരിഞ്ഞ് ആൾ ഒരോ പോസ് തരും. അങ്ങനെ കുശലം ഒക്കെ പറഞ്ഞ് ഒരുപാട് ഫോട്ടോയൊക്കെ എടുത്തിട്ടേ എല്ലാവും പോകാറുള്ളൂ.

മലപ്പുറം ജില്ലയിലെ എടപ്പാൾ ആണ് എന്റെ നാട്. വീടിന് ചുറ്റും കാണപ്പെടുന്ന തുമ്പിക്കുട്ടന്മാരെ നോക്കുന്നത് കൂടാതെ ഭജന സമിതി അമ്പലക്കുളവും മണലിയാർക്കാവ്







പാടവും, വെങ്ങിനിക്കുളം പാടവുമെല്ലാമായിരുന്നു എന്റെ പ്രധാന പടനിലങ്ങൾ അഥവാ തുമ്പി നിരീക്ഷണ കേന്ദ്രങ്ങൾ. കിണറ്റിന്റെ വക്കത്ത് നിന്ന് കിട്ടിയ മരതക കണ്ണുകളുള്ള കുളുൻ തുമ്പിയും (*Tetrathemis platyptera*), മുഖത്ത് വല്ല പൂമ്പൊടിയും പറ്റിയതാണെന്ന് ആദ്യം തെറ്റിദ്ധരിച്ച ചെമ്മുഖപ്പുത്താലിയും (*Pseudagrion rubriceps*), നല്ല വെയിലുള്ളപ്പോൾ ചെറിയ ഉയരത്തിൽ വട്ടമിട്ട് പറക്കുന്ന ഓണത്തുമ്പിയും (*Rhyothemis variegata*) ഒക്കെ തുടക്കത്തിലേ വളരെ കൗതുകം ജനിപ്പിച്ചിരുന്നു. സൂഹൃത്തുക്കളായ ഷാഹിലിനും മാസിനും ഒപ്പം ഒരു തവണ പൊന്നാനിയിൽ നിരീക്ഷണത്തിന് പോയപ്പോൾ ഭാരതപ്പുഴയിലെ ഒരു ചെറിയ ദ്വീപിൽ വെച്ച് ആയിരക്കണക്കിന് വരുന്ന തുലാത്തുമ്പികളെ (*Pantala flavescens*) കാണാനിടയായിരുന്നു. ഇന്ത്യയിൽ നിന്ന് ആഫ്രിക്കയിലേക്കും, അവിടെ നിന്ന് തിരിച്ച് ഇന്ത്യയിലേക്കും, പല തലമുറകളിലായി 16,000 km താണ്ടി നടത്തുന്ന ഈ മഹത്തായ പ്രാണി ദേശാടനത്തെക്കുറിച്ച് (insect migration) കേട്ടിട്ടുണ്ടെങ്കിലും ഇത്രയും അധികം തുമ്പികളെ ഒന്നിച്ചു കാണുന്നത് ആദ്യമായിട്ടായിരുന്നു, അതൊരു വല്ലാത്ത അനുഭവമായിരുന്നു, എണ്ണിയാലൊടുങ്ങാത്ത തുമ്പികൾക്കിടയിൽ നമ്മളും അവരിലൊരാളെപ്പോലെ.

പിന്നീട് യാത്രകൾ ചെയ്യാൻ തുടങ്ങിയപ്പോൾ ജലാശയങ്ങൾ ഉള്ളിടത്തും മറ്റു വനപ്രദേശങ്ങളിലും തുമ്പികളെ തപ്പൽ പതിവായി. ചിമ്മിനി വന്യജീവി സങ്കേതത്തിൽ തുമ്പി സർവ്വേക്ക് പോയപ്പോൾ, ഇരുട്ടുമുടിനിൽക്കുന്ന ചോലക്കാട്ടിൽ ഒരു ഓറഞ്ച് വെളിച്ചമെന്നപോലെ കൂങ്കുമ നിഴൽതുമ്പിയെയും (*Indosticta deccanensis*) വയനാട് തിരുനെല്ലിയിലെ കാളിന്ദിയുടെ തീരത്ത് നിന്ന് വളരെ മനോഹരമായ ഒരു ജ്യോമിതീയ ശില്പം പോലെ നീലക്കുറുവാലന്റെ (*Palpopleura sexmaculata*) പെണ്ണിനെ കണ്ടപ്പോഴും മുസൂറി മലമുകളിൽ വെച്ച് കടും നീല ചിറകിൽ വയലറ്റ് അടയാളങ്ങളുള്ള *Aristocypha quadrimaculata* യെ കണ്ടപ്പോഴുമൊക്കെ ഒത്തിരി അത്ഭുതത്തോടെ നോക്കി നിന്നിട്ടുണ്ട്.

കഴിഞ്ഞ മൂന്നു വർഷമായി രാജസ്ഥാനിലെ തുമ്പികളിലാണ് ശ്രദ്ധ. ലോക്ക്ഡൗൺ ഒക്കെ കഴിഞ്ഞു തിരിച്ചു എന്റെ ക്യാമ്പസായ Central University of Rajasthan-ൽ എത്തിയപ്പോൾ കരുതിയിരുന്നത് ഈ വരണ്ട ഭൂപ്രദേശത്ത് തുമ്പികൾ ഒന്നും തന്നെ കാണില്ല എന്നായിരുന്നു. എന്നാൽ എന്നെ ഞെട്ടിക്കുന്നതായിരുന്നു ഫീൽഡിൽ ഇറങ്ങി കുറച്ചു ദിവസങ്ങൾ കൊണ്ട് കിട്ടിയ റിസൾട്ട്. ഇതുവരെ ഒരു *Anax* സ്പീ



ഷീസ് ഉൾപ്പെടെ 25 തരം തുമ്പികളെ ക്യാമ്പസിൽ നിന്ന് റിപ്പോർട്ട് ചെയ്യാൻ കഴിഞ്ഞിട്ടുണ്ട്. അതിൽ പല തുമ്പികളെയും ഞാൻ ആദ്യമായാണ് കാണുന്നത്. MSc പഠനത്തിന്റെ ഭാഗമായി ഞാൻ ഇപ്പോൾ ചെയ്തു കൊണ്ടിരിക്കുന്ന പ്രൊജക്ട് ഞങ്ങളുടെ ക്യാമ്പസിലും പരിസരപ്രദേശങ്ങളിലുമുള്ള ജലാശയങ്ങളുടെ ബൗദ്ധിക രാസ ഗുണനിലവാര സൂചികയും (Water quality index) അവിടെ കണ്ടുവരുന്ന തുമ്പികളെയും ബന്ധപ്പെടുത്തിയുള്ള ഒരു പഠനമാണ്. ഇനിയും ഒരുപാട് പുതിയ തുമ്പികളെ കാണാനുള്ള യാത്രകൾ തുടരുന്നു.

**About the Author**

അഹമ്മദ് സഹൂദ്. രാജസ്ഥാൻ കേന്ദ്ര സർവകലാശാലയിൽ നിന്ന് പരിസ്ഥിതിശാസ്ത്രത്തിൽ ബിരുദാനന്തര ബിരുദം കഴിഞ്ഞു . തുമ്പികളുടെ പാരിസ്ഥിതിക പ്രാധാന്യത്തെ പറ്റിയായിരുന്നു ഗവേഷണം.



Central University of Rajasthan Campus pond



Water quality Sampling

*Aristocypha quadrimaculata*  
© Ahammed Saeed





# തുമ്പിയുടെ പരിവേദനങ്ങൾ

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മാന്യ നരവർഗം അറിയുന്നതിന്,

മുട്ടവിരിഞ്ഞു കഠിനമായ ലാർവാ ജീവിതം അതിജീവിച്ച്, തുമ്പികളായി സാഹസികജീവിതം നയിച്ചുപോരുന്ന ഞങ്ങളെ കൊണ്ട് കല്ലെടുപ്പിച്ച ചരിത്രം നിങ്ങൾക്കുണ്ട്. എന്റെ എത്ര മുതുമുത്തച്ഛന്മാരാണ് ഞങ്ങളെ നടുവൊടിഞ്ഞു പരലോകം പുകിയത്! എന്നിട്ട് അതൊക്കെ നൊസ്റ്റാൾജിയ എന്ന് പറഞ്ഞു നടക്കാൻ എങ്ങനെ കഴിയുന്നു?

ഞങ്ങളുടെ സ്ത്രീസംഘത്തിന് സത്യമെങ്കിലും മനോവിഷമം ഉണ്ടാക്കുന്ന 'ആൺ തുമ്പിയാണ് പെൺത്തുമ്പിയേക്കാൾ ആകർഷകം' തുടങ്ങിയ പ്രസ്താവനകൾ ഞങ്ങൾ പ്രോത്സാഹിപ്പിക്കുന്നതല്ല.

ശലഭങ്ങളെ 'തുമ്പികൾ' എന്ന് വിളിക്കുന്നവർ ഇപ്പോഴുമുണ്ട്. അത് ഞങ്ങളുടെ വ്യക്തിത്വത്തെ ബാധിക്കുന്ന കാര്യമാണ്. ഈച്ചയേം പൂച്ചയേം ഒക്കെ മനുഷ്യാ എന്ന് വിളിച്ചാൽ നിങ്ങൾക്ക് സഹിക്കുമോ. നല്ല ഒന്നാന്തരം പ്രാണി വേട്ടക്കാരായ ഞങ്ങൾ പൂന്തേനുണ്ണും എന്നും പറഞ്ഞു ചിലർ നടപ്പുണ്ട്. എന്തൊരു കഷ്ടമാണ്!

ഞങ്ങളെ ബിരിയാണിയാക്കി ശാപ്പിടുന്ന പക്ഷികളെയും തവളകളെയും നിങ്ങൾ മഹത്വവൽക്കരിക്കുന്നത് കണ്ട് പണ്ട് അസുയപ്പെട്ടിട്ടുണ്ട്.. ഇപ്പോൾ ഞങ്ങൾക്കും ഒരു സുപ്രധാന സ്മാനം തന്നതിൽ നന്ദിയുണ്ട്...

ഒരു ചിത്രം എടുക്കാൻ ഒരു നിമിഷം ഒന്ന് ഇരുന്നുതന്നുടെ എന്ന് ചോദിക്കുന്ന വരോട്: മൂന്നുറ്റ് ദശലക്ഷം വർഷങ്ങളുടെ പാരമ്പര്യം ഉള്ള ഞങ്ങൾക്ക് സ്വല്പം ജാഡ ഒക്കെ ആകാം.

ഞങ്ങളെ ചവച്ചു തിന്നുകൊണ്ടിരിക്കുന്ന പക്ഷികളുടെ ചിത്രം ഒക്കെ എടുത്ത് വൈറൽ ആകാൻ നോക്കുന്ന നിങ്ങളുടെ മാനസികാവസ്ഥ ഞങ്ങൾക്ക് മനസ്സിലാകുന്നില്ല.

എന്തായാലും സാഹിത്യത്തിലും കലയിലും ഞങ്ങൾക്ക് നല്ല ഇമേജ് തന്നതിൽ സന്തോഷിക്കുന്നു.. പ്രോത്സാഹിപ്പിക്കുന്നു.

‘പൊന്നോലത്തുമ്പിൽ പൂവാലിത്തുമ്പീ  
ആട് ആട് നീയാടാട്.’ ആഹാ എത്ര മനോഹരം.

ഒരു അഭ്യർത്ഥന. ഞങ്ങളുടെ വാസസ്ഥലങ്ങൾ നശിച്ചുകൊണ്ടിരിക്കുകയാണ്. ഒന്ന് മുട്ടയിടാൻ മലിനമല്ലാത്ത സ്ഥലങ്ങൾ കിട്ടാൻ പ്രയാസമാകുന്നു. ഞങ്ങളുടെ ഭാഷ ആർക്കും മനസ്സിലാവില്ല. നിങ്ങൾ വേണം ഞങ്ങൾക്ക് വേണ്ടി ശബ്ദിക്കാൻ. ഇവിടെ ഇങ്ങനെ വൃത്തികേടാക്കിയാൽ ദേശാടകരായ തുലാതുമ്പികളൊക്കെ വരുമ്പോ എന്ത് വിചാരിക്കും!

അവസാനമായി ഒരു കാര്യം. ഞങ്ങളെ തേടി വരുന്നവർ ചാത്തന്മാരായ കുഴിയാനതുമ്പിയുടെയും മുങ്ങാതുമ്പിയുടെയും കെണിയിൽ വീഴരുത്. അവർ ഞങ്ങളല്ല ജാഗ്രത! എപ്പോഴും തെറ്റിദ്ധരിക്കപ്പെടാനുള്ളതല്ല ഒരു തുമ്പിയുടെ ജീവിതം.

## About the Author

Cicy is an ayurvedic doctor by profession and wanderer by passion. Even though she rarely communicates with *Homo sapiens*, she is in constant touch with other organisms.



# ODE NEWS

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Executive Member, Society for Odonate Studies

## A NEW SPECIES OF BAMBOOTAIL WITH PECULIAR BREEDING BEHAVIOUR DISCOVERED FROM THE AGASTHYAMALAI HILLS OF THE WESTERN GHATS



Ever since its description in 1922 by F.C. Fraser, the endemic genus *Phylloneura* was thought to be monotypic, with the sole representative, *Phylloneura westermanni* Fraser, 1922, living in the lush forests of the Nilgiris. Now, a team of researchers, including Vivek Chandran, Reji Chandran, Suraj C.R., Dr. Subin K. Jose, and Dr. Pankaj Koparde has discovered a second species, named *Phylloneura*

*rupestris* Chandran, Chandran, Jose & Koparde, 2024 from the Agasthyamalai hills of the Western Ghats. The species is named after its peculiar behaviour of laying eggs in seasonal rills flowing over steep rock surfaces. The new species can be easily told apart from the similar-looking black-and-blue bambootails of the Western Ghats by the long blue marking on its 7th abdominal segment. This is the first bambootail species to be described from the Ghats after 93 years. The type locality of the species is at the Merchiston estate, over 850 m in elevation, in the biodiversity-rich Ponmudi hills, Thiruvananthapuram, but the authors opine that the species could occur at appropriate habitats throughout the Agasthyamalai hill range. The study has been published in the International Journal of Odonatology.

### Reference:

Chandran, A.V., Chandran, R., Suraj, C.R., Jose, S.K. & Koparde, P. (2024): Description of *Phylloneura rupestris* sp. n. (Odonata, Platycnemididae) from the Western Ghats, India, with notes on its reproductive behaviour. International Journal of Odonatology, 27, 26–36  
<https://doi.org/10.48156/1388.2024.1917259>

## A NEW SPECIES OF REEDTAIL DISCOVERED FROM WAYANAD



The research team comprising Vivek Chandran, Muneer P.K., Madhavan M., and Dr. Subin K. Jose has discovered the 16th species of *Protosticta* of the Western Ghats from the Camel's Hump Mountain Range in the South Wayanad Forest Division of Kerala, India. The type locality of the new species is the Vellarimala peak, at 1350 metres altitude, and it has also been recorded from the adjoining hill, 900 Kandi. Unlike in most reedtails found in the Western Ghats, the male and the female of the new species are of the same length, but show marked colour dimorphism. Hence, it has been named *Protosticta sexcolorata* Chandran, Muneer, Madhavan & Jose, 2024. It is most similar to the elusive *Protosticta hearseyi* Fraser, 1922, but can be told apart from it by the structure of the prothorax and anal appendages. The new species also lacks lateral markings on the 9th abdominal segment. It is highly seasonal, seen flying only during early monsoon months. All individuals of the new species were seen perched on shrubbery

at the sides of precipitous ravines in evergreen jungle, near small, seasonal streams. This finding underscores the crucial role of microhabitats within the Western Ghats in fostering distinct biodiversity. The study has been published in the Journal of Asia-Pacific Biodiversity.

### Reference:

Chandran, A.V., Muneer, P.K., Madhavan, M. & Jose, S.K. (2024): Description of *Protosticta sexcolorata* sp. nov. (Odonata, Platystictidae) from the Western Ghats, India. Journal of Asia-Pacific Biodiversity, 295-302

<https://doi.org/10.1016/j.japb.2023.11.010>

### ABOUT THE AUTHOR

Vivek Chandran A is a PhD scholar at Christ College (Autonomous), Irinjalakuda. He is driven to solve the mysteries of odonates and reveal them to the public. In this, he finds bliss.

# Odonates in a Nutshell

Balachandran V

All around us nature thrives in its myriad forms of life. From a leaf of grass to high mountains, from a puddle to the vast oceans, from an amoeba to Sperm Whale, there are millions of life forms that share this planet with us. Yet how much do we know about it? Perhaps the most fascinating group of animals are the insects. It is estimated that at any given time, there are ten quintillion (10,000,000,000,000,000,000) individual insects alive. They inhabit every nook and corner of the world, in every possible habitat we can imagine. And among insects, dragonflies and damselflies are

one of the most fantastic groups, unique in their physique, behaviour and role in the vast spectrum of life on earth.

Dragonflies (Anisoptera) and damselflies (Zygoptera) together comprise the Order Odonata. It is among the most ancient of Earth's living fauna. Fossils of the order Protodonata, the first recognizable progenitors of present-day dragonflies, are known from the Upper Carboniferous period 325 million years ago.

Odonates lay their eggs in fresh water and the larger part of their lives as larvae is spent in the aquatic habitats such as rivers, lakes, ponds and even water-filled tree holes. The life cycle of odonate has only three stages; egg, larva and adult, unlike butterflies which have a pupal stage in addition. The larval stage of odonates varies from few weeks to several years during which period they grow in size by shedding their exoskeletons. The fully grown larva emerges from water and aerial stage of life begins. Life as a flying insect lasts only a few months.

©Reji Chandran



Life of the adult odonate is spent in foraging, establishing territory and finding a mate to ensure progeny. Odonates are carnivorous; they are cannibalistic too. Most of the species spend their life near water bodies. Species like Global Wanderer (*Pantala flavescens*) migrate long distances like from India to Africa. Their descendants cross the ocean, keeping the migratory circuit alive for millenia.

Odonate behaviour is a fascinating subject to study. They are very aggressive, agile fliers ( can fly forward and backward, upward and downward, hover). They hunt and feed on the wing. Their compound eyes have 30,000 facets and the visual field is almost 360 degrees. They can detect color, UV light and movement, which makes them the perfect hunting machines. It has been reported that they have a successful hunting rate of 95% compared to 50% of a Great White Shark or 25% of an African Lion.

Odonates are considered to be beneficial to humanity because they consume insects which are agricultural pests or vectors such as disease - spreading mosquitos. Many of the odonates as larvae can survive only in unpolluted waters; hence they are excellent bio-indicators also. They are harmless to humans.

It is quite easy and fun to observe and study odonates. Go to any waterbody and you will find them all around. If you have space at home for a little garden, make a small pond and watch how dragonflies and damselflies come. Keep a few plants in the ponds, twigs for dragonflies to perch and make sure that there is plenty of sunlight and a little patch of greenery around the pond. You will be able to see

the odonates breeding, feeding and flying around. It is quite likely that there will be groups of nature enthusiasts where you live. Join such groups to learn more. Take photographs if you have a camera. There are plenty of resources in the internet which can guide you further in your dragonfly watching.

The habitats of these beautiful insects are under threat as humans relentlessly destroy the environment; waterbodies dry up or get land-filled or contaminated beyond redemption. There are more than 6000 species of odonates all over the world. Many more remains to be discovered. Unless the natural environment is protected and conserved, we stand to lose them for ever.

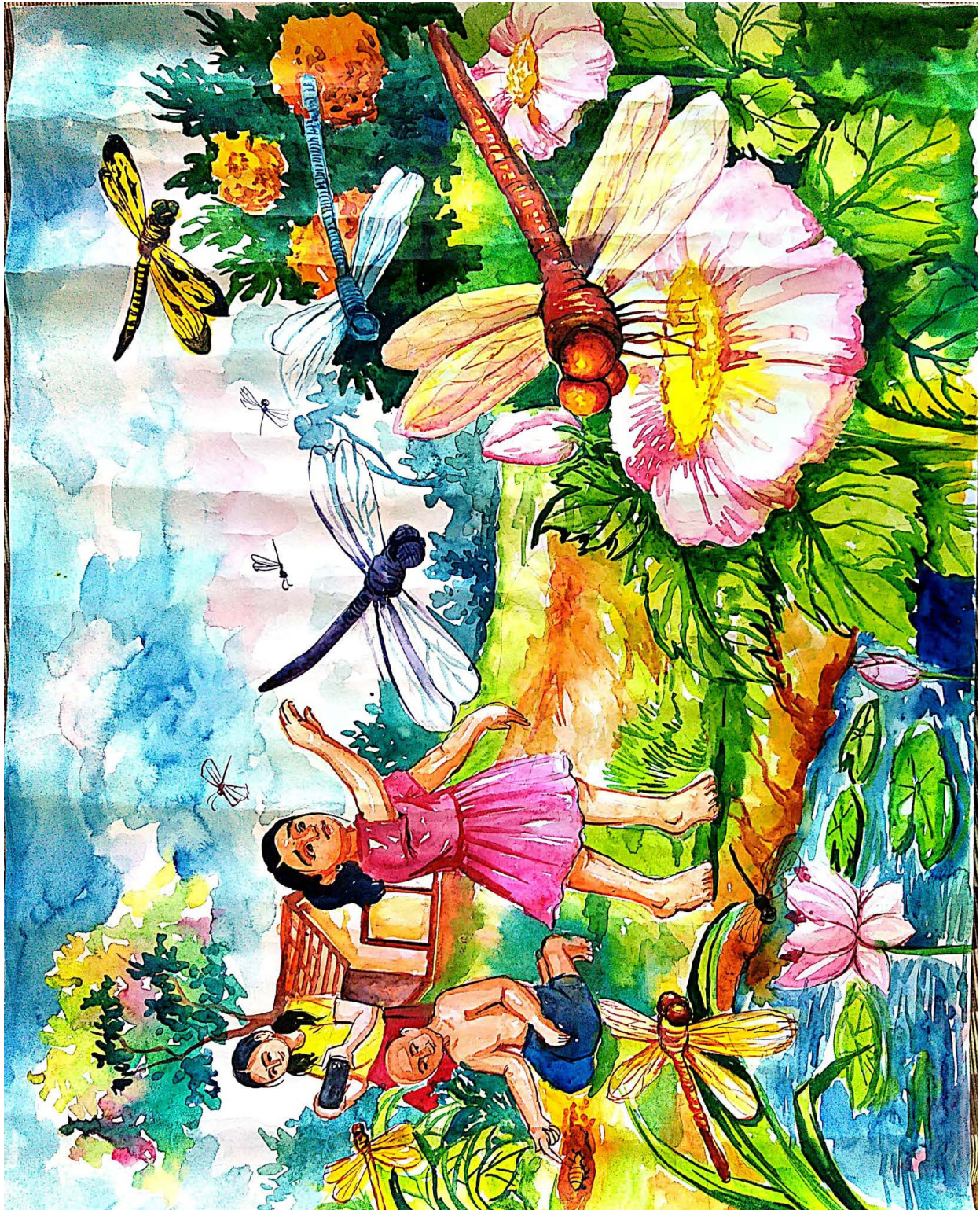
Modern life hardly gives us any time to look at our surroundings. We mug up a lot of things at school, but we forget to learn from the greatest school of all, nature. It is of prime importance that we learn, understand, love and protect our environment, because our survival depends on its health. As the only species able to exploit nature to extremes, It is our prime duty to take care of our fellow creatures and live in harmony with nature.

### **About the Author**

Balachandran V is one of the founding members of SOS. He is a dabbler in natural history, with focus on dragonflies and spiders.



# A day in the life of a Dragonfly



Entry from

***Aleena AP***

in dragonfly painting competition conducted as a part of the Dragonfly Festival Mini-Mela (Kerala) organized in Thiruvananthapuram by WWF-India jointly with Society for Odonate Studies.



# OUR PUBLICATIONS

## INTRODUCTION TO ODONATA

With Identification Keys for  
Dragonflies & Damselflies Found in Kerala

Version 2.0



Society for Odonate Studies

*Introduction to Odonata with Identification Keys for Dragonflies  
and Damselflies Found in Kerala.*

Version 2.0

Edited by Jeevan Jose & Vivek Chandran A

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SCAN ME !



ചളവറയിലെ തുമ്പി വിശേഷങ്ങൾ



മുഹമ്മദ് ഷെരീഫ് കെ.  
Society For Odonate Studies (SOS)

*ചളവറയിലെ തുമ്പി വിശേഷങ്ങൾ*

*Chalavarayile Thumbi Visheshangal*

First Edition

Muhammed Sherif K

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SCAN ME !



## Common Odonates of Kerala

Multicolour brochure featuring commonly found dragonflies and damselflies of Kerala. A quick reference material that comes really handy for easy identification of Odonates during field visits.

## Society for Odonate Studies

The Society for Odonate Studies (SOS) is a non-political, non-profit organization formed to impart knowledge to the public on the insect order of Odonata which comprises of dragonflies and damselflies and to conduct scientific studies, with the objective of conservation of the species and their habitats.



